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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,972	12/26/2006	Takayuki Sakakibara	292089US0X PCT	7265

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
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ALEXANDRIA, VA 22314

EXAMINER

WALTERS JR, ROBERT S

ART UNIT	PAPER NUMBER
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1792

NOTIFICATION DATE	DELIVERY MODE
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06/17/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/581,972	Applicant(s) SAKAKIBARA ET AL.	
	Examiner ROBERT S. WALTERS JR	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 1-4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/7/2006, 4/4/2007, 11/6/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Application

Claims 1-13 are pending. Claims 1-4 are withdrawn. Claims 5-13 are presented for examination.

Election/Restrictions

Applicant's election with traverse of claims 5-13 in the reply filed on 5/7/2009 is acknowledged. The traversal is on the ground(s) that the groups are not patentably distinct, nor is there a search burden. This is not found persuasive because this is a national stage application, therefore there is no requirement to show patentably distinctness or a search burden. Furthermore, the common technical feature of the invention is a spring having an undercoat layer of an epoxy resin powder coating containing zinc and a topcoat containing an epoxy polyester resin powder. This feature fails to become a special technical feature because Grubb et al. (U.S. PGPUB No. 2002/0090823) and Guyomard (U.S. Pat. No. 4316939) teach this technical feature (see rejection presented below).

The requirement is still deemed proper and is therefore made FINAL.

Information Disclosure Statement

Two references on the information disclosure statement filed 11/6/2007 have not been considered as they are not in the English language, and there is no explanation of the relevance of the references.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 5, 8, 9, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grubb et al. (U.S. PG PUB No. 2002/0090823) in view of Guyomard (U.S. Pat. No. 4316939).

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Regarding claims 5, 8, 9, 12 and 13, Grubb teaches a method of coating a spring (0001) which comprises:

- (a) a pretreating step of forming a phosphate film on the surface of the spring (0021)
- (b) applying an undercoat of epoxy resin powder containing preferably at least about 200 phr of zinc (0014);
- (c) applying a topcoat of an epoxy resin powder (0018); and
- (d) a baking step (0018).

Grubb further teaches that both epoxy resin powders can comprise a bisphenol A type epoxy resin (0022-0023), and may comprise pigments (0038). Grubb fails to teach that the epoxy resin powder comprises at least 75 weight % of zinc, or the use of a epoxy polyester resin powder for the topcoat.

First, with regards to the weight % of zinc, it would have been obvious to one of ordinary skill in the art at the time of the invention that the percentage of zinc would affect both the coating quality as well as the ability of the coating to resist corrosion and toughen the epoxy resin (see Grubb at 0014). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to choose the instantly claimed range through process optimization, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re Boesch*, 205 USPQ 215 (CCPA 1980).

Second, Guyomard teaches the use of an epoxy polyester resin powder to be applied to a metallic object having a first anti-corrosive coating of zinc (see Guyomard at claims 1-7).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Grubb's method by utilizing an epoxy polyester resin powder as the topcoat, as is disclosed by Guyomard. One would have been motivated to make this modification as Guyomard teaches that the addition of a polyester resin provides better results in terms of resistance to the elements as compared to simply an epoxy resin powder (column 3, line 38-column 4, line 15).

2. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grubb in view of Guyomard as applied to claim 5 above, and further in view of Springer et al. (U.S. Pat. No. 6537610).

Regarding claim 6, Grubb in view of Guyomard teach all the limitations of claim 5, but fail to teach using an intermediate heating step to form a film in a half-cured state. However, Springer teaches a process for applying a dual-layer coating to an automobile suspension part (abstract), such as a spring (column 7, line 44) comprising applying a zinc-rich epoxy powder (column 7, lines 51-58), followed by an intermediate heating step to half-cure the epoxy resin powder (column 7, line 65-column 8, line 4) at a temperature of approximately 149-177 °C, followed by coating a thermoplastic powder (column 8, lines 24-29), and a final baking step conducted at a temperature of approximately 149-166 °C (column 9, lines 63-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Grubb in view of Guyomard's method by incorporating an intermediate heating step as is disclosed by Springer. One would have been motivated to make this modification as Springer

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teaches that this approach overcomes problems of using a typical electrostatic application of the topcoat, and allows for a high-volume process while overcoming these problems (column 2, lines 13-17).

3. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grubb in view of Guyomard as applied to claim 5 above, and further in view of Springer and ("Powder Coatings Made Easy").

Regarding claim 7, Grubb in view of Guyomard teach all the limitations of claim 5 (see above), but fail to teach the specifics of the preheating step, intermediate heating step and final heating step. However, Springer teaches the specifics of the intermediate and final baking step (see rejection above). One would have been motivated to modify Grubb in view of Guyomard's method with Springer's heating steps for the reasons previously outlined. Furthermore, "Powder Coatings Made Easy" teaches utilizing a preheating step in powder coating at a temperature of 88 °C (Preheating Section, page 36). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Grubb in view of Guyomard's method by including a preheating step prior to applying the undercoating, as is discussed in "Powder Coatings Made Easy". One would have been motivated to make this modification as "Powder Coatings Made Easy" teaches that this allows for removing any ambient moisture on the part to be coated, and also helps to adhere the powder to the part to be coated (Preheating Section, page 36).

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4. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grubb in view of Guyomard as applied to claim 5 above, and further in view of Dutheil et al. (U.S. Pat. No. 5891515).

I. Regarding claim 10, Grubb in view of Guyomard teach all the limitations of claim 5, but fail to teach the inclusion of a block isocyanate into the epoxy resin powder. However, Dutheil teaches coating a metallic part with an epoxy resin powder (abstract and column 2, lines 41-47). Dutheil further teaches inclusion of a hardener in the epoxy resin, such as a blocked isocyanate (column 2, lines 57-59 and column 3, lines 1-6). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Grubb in view of Guyomard's method by inclusion of a blocked isocyanate into the epoxy resin powder, as taught by Dutheil. One would have been motivated to make this modification as one of ordinary skill in the art at the time of the invention could have added the blocked isocyanate as a conventional hardener into Grubb in view of Guyomard's method with a reasonable expectation of success (as it would be expected to harden similarly in both methods), and the predictable result of providing an epoxy resin powder for application to a spring.

II. Regarding claim 11, Grubb in view of Guyomard and further in view of Dutheil teach all the limitations of claim 10 (see above), but fail to teach the specific range of block isocyanate that is present. However, it would have been obvious to one of ordinary skill in the art at the time of the invention that the amount of hardener will affect the coating quality (see Dutheil at column 3, lines 12-15). Therefore, it would have been obvious to one of ordinary skill in the art

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at the time of the invention to choose the instantly claimed range through process optimization, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re Boesch*, 205 USPQ 215 (CCPA 1980).

Conclusion

Claims 1-13 are pending.

Claims 1-4 are withdrawn.

Claims 5-13 are rejected.

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT S. WALTERS JR whose telephone number is (571)270-5351. The examiner can normally be reached on Monday-Friday, 8:00am to 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571)272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Barr/
Supervisory Patent Examiner, Art Unit
1792

/ROBERT S. WALTERS JR/
June 12, 2009
Examiner, Art Unit 1792